

REMARKS/ARGUMENTS

Claim 1, 3 and 4 have been amended. Claim 2 has been canceled without prejudice. New claims 18-25 have been added. No other claims have been amended, added or canceled. Claims 1, 3-13, and 18-25 are pending. Reconsideration of the above-referenced application is requested in light of the amendments and the following remarks.

Finality of Rejections

The Office made its § 112 ¶1 rejections final even though they present a new ground of rejection. "Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is [not] necessitated by applicant's amendment of the claims" MPEP § 706.07(a).

Amendments to the claims could not have necessitated this new ground of rejection because the § 112 ¶1 rejection was directed at independent claim 1 – which was in original form. Moreover, no claims were amended or added in Applicants' January 19, 2006 reply to the previous October 5, 2005 Office Action. Indeed, the October 5, 2005 Office Action allowed claims 1-13. (October 5, 2005 Office Action, page 4, section 8). Applicants respectfully request that the designation of "final" be removed and that the currently presented amendments and new claims be entered.

Objections to Claims 1, 3 and 4

The Office objected to claim 1, 3 and 4 for informalities. Claims 1 and 4 are amended to comply with the objection.

Claim 3 is amended to clarify that the term "original sequence" meant "original ordered sequence of the set of original ordered sequences." It is respectfully submitted that this amendment obviates the objection to claim 3.

35 U.S.C. § 112 Rejections

The Office rejected claims 1-13 under 35 U.S.C. § 112 as failing to comply with the enablement requirement. Specifically, the Office found that a statement in claim 1 conflicted with the disclosure at paragraphs 0067-0068 on page 29 of Applicants' specification. Claim 1 has been amended to obviate the rejection.

Applicants assert the amendments are fully supported by the detailed description. For example, the amendment of claim 1 uses the term "subsequence." Referring to paragraphs 0067-0068 on page 29 of Applicants' specification, the "modified training sequence to be transmitted" (with length 73 in the given example) is a subsequence of the row of "123 elements." An example of a subsequence is the described "element with index L of the selected row and include the next 72 elements in order." (Specification, page 29, paragraph 0067).

Claim 1 is now allowable. Claim 2 has been canceled. Claims 3 – 13 and new claim 18, which depend from claim 1 are also allowable.

New Claims 19 – 21 are Patentable

Previously canceled claims 14, 16-17 are reinstated, with some modification to former claims 14 and 16, as new claims 19-21. MPEP § 608.01(s) ("A claim canceled by amendment (deleted in its entirety) may be reinstated only by a subsequent amendment presenting the claim as a new claim with a new claim number.").

Independent claim 19 differs from canceled claim 14 in that the last paragraph thereof is modified as follows compared to the last paragraph of former claim 14:

a processor to generate the training sequence by taking and modifying a number of elements of one of the plurality of ordered sequences ~~in order~~, wherein a function of ~~the~~ autocorrelation of the training sequence is below a threshold value.

The October 5, 2005 Office Action had rejected independent claim 14 (now, in modified form, claim 19) under 35 U.S.C. § 103(a) as being unpatentable over Satonius et al. (US Patent # 4,397,029) in view of Guberman (US Patent # 6,138,089) (hereinafter, respectively, "Satonius" and "Guberman").

However, the combination of Satonius and Guberman fails to teach or suggest at least the following limitations of claim 19:

a data store having stored therein a plurality of ordered sequences **for use in generating a training sequence**; and

a processor to generate the training sequence **by taking and modifying a number of elements of one of the plurality of ordered sequences**

The October 5, 2005 Office Action (Page 3) cited Satonius 4:49-52 as describing stored ordered sequences for use in generating a training sequence. However, that portion of Satonius instead describes, "The synchronizing indicator is received by the training sequence generator 20, and causes **successive training signals** to be read out of a memory device included therein." (Satonius, col. 4, lines 49-52) (Emphasis added). Thus, the cited portion of Satonius describes stored "successive training signals" and not stored "ordered

sequences for use in generating a training sequence.” In other words, what is described as stored in the cited portion of Satonius is the desired training signals themselves rather than ordered sequences for generating the training sequences. Thus, the cited portion of Satonius does not teach or suggest at least one limitation of claim 19.

The cited portions of Satonius also fail to teach or suggest generating the training sequences “by taking and modifying” a stored ordered sequence as recited in claim 19. Instead, the cited portion of Satonius states that how to generate training sequences is “not described in detail herein.” (Satonius, col. 4, lines 45-46). While Satonius does describe a sequence generator causing “successive training sequences to be read out of a memory device,” it does not describe generating the training sequences by taking and modifying stored ordered sequences. Therefore, Satonius also fails to teach or suggest at least this additional limitation of claim 19.

The October 5, 2005 Office Action relies upon Guberman to describe autocorrelation and not stored ordered sequences for generating training sequences or the generation of training sequences from the stored sequences. The cited portions of Guberman fail to teach or suggest at least the above limitations of claim 19. Therefore, claim 19 is patentable over Satonius in view of Guberman. Claims 20 and 21 depend from patentable independent claim 19 and are therefore themselves patentable. MPEP § 2141.03.

Objection to Former Claim 14, Reinstated as Claim 19

The October 5, 2005 Office Action objected to now canceled claim 14 under 35 U.S.C. § 112 ¶1, finding that there was an insufficient antecedent basis for, “the statement of ‘the autocorrelation’ as recited in line 9.” Applicants assert that this objection is obviated with respect to new claim 19.

Objection to Former Claim 16, Reinstated as Claim 20

The October 5, 2005 Office Action objected to now canceled claim 16 under 37 CFR 1.75(c) "as being of improper dependent form for failing to further limit the subject matter of a previous claim." (October 5, 2005 Office Action, page 2). While Applicants disagree with this objection, claim 20 differs from canceled claim 16 so as to obviate that objection. The changes shown are those made to claim 14 to craft claim 20:

... further comprising the processor to generate another training sequence by taking a number of elements of another of the plurality of ordered sequences, wherein the cross correlation of the another training sequence with the ~~any other~~ training sequence is below a threshold value.

Applicants assert that the differences between claim 20 and canceled claim 16 obviate the objection previously made to claim 16.

New Claims 22-25 are Patentable

Independent claim 22 is a computer readable medium claim that is similar to patentable claim 1. Unlike claim 1, it does not specifically recite creating extended sequences or modified extended sequences. Applicants assert that the recitation of extended sequences or modified extended sequences is not essential to the patentability of claim 22. New claims 23-25 depend from allowable claim 22 and are therefore also allowable.

CONCLUSION

Applicants respectfully submit the present application is in condition for allowance and request reconsideration. If the Examiner believes a telephone

conference would expedite or assist in the allowance of the present application,
the Examiner is invited to call Jose Mata at (503) 439-8778.

Authorization is hereby given to charge our Deposit Account No. 02-2666
for any charges that may be due.

Respectfully submitted,

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